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EXAMINER BRINEY III, WALTER F				
ART UNIT		PAPER NUMBER		
2646				

DATE MAILED: 08/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/515,589

Applicant(s)

STELMAN, BRUCE W.

Examiner

Walter F. Briney III

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 7-22 and 24-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-20 and 24-27 is/are rejected.
- 7) ☒ Claim(s) 21 and 22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. **Claims 7-17, 20, and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deutsch et al. (US Patent 5,577,115) in view of Ryu (US Patent 5,400,397).**

**Claim 17** is limited to *a method of interfacing a telephony appliance to a telephone switching system*. Deutsch discloses an interface recognition unit that determines whether a telephone network is either ISDN (i.e. *digital*) or *analog* (abstract) (this is analogous to the limitation of *identifying a first communication protocol utilized by the telephone switching system*). Deutsch discloses an interface that configures itself according to the detected network, therefore, the interface's adaptation serves to *determine* if terminal devices (i.e. *telephony appliances*) will operate using digital or analog signals (i.e. *communicate voice as digital or analog signals*) (column 2, line 46-column 3, line 19). Deutsch discloses configuring an interface using an ISDN circuit (i.e. *activating a first signal path through an apparatus...*) when it is determined that the network is an ISDN network (i.e. *when the telephone system communicates voice signals as digital samples*) (column 3, line 56-column 4, line 12). Deutsch discloses, as part of his ISDN circuit (i.e. *the first signal path includes...*), a CODEC that converts digital ISDN signals to analog (i.e. *a converter for converting the digital samples into an*

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*analog signal*) (column 4, lines 13-44). Deutsch discloses configuring an interface using an analog circuit (i.e. *activating a second signal path ...*) when it is determined that the network is an analog network (i.e. *when the telephone system communicates voice signals in an analog format*) (column 2, line 47-column 3, line 19). The analog signal path includes analog circuitry (i.e. *the second signal path includes analog signal processing circuits*) (column 4, lines 45-65). Deutsch provides a flexible arrangement for the connection of an analog phone to either ISDN or POTS networks, however, Deutsch does not allow for other types of phone terminals to be connected, such as 2-wire, 4-wire, and digital. Therefore, Deutsch anticipates all limitations of the claim with the exception of *identifying a second communication protocol utilized by the telephony appliance*.

Ryu teaches that an automatic branch exchange (i.e. CPE) benefits from universal extension ports that allow 2-wire, 4-wire, and digital phone terminals to be connected to them. It allows greater user flexibility and the invention of Ryu also allows a doubling of CPE numbers (column 1, lines 5-68). It would have been obvious to one of ordinary skill in the art at the time of the invention to allow multiple types of phone terminals to be connected and identified by a branch exchange as taught by Ryu for the purpose of providing extended operability to the invention of Deutsch.

The limitations corresponding to *wherein the first communication protocol and the second communication protocol must first be identified before the telephony appliance and the telephone switching system being communicating with one another* are

discussed in detail in the Non-Final office action filed 01 December 2004 in the section entitled *Response to Arguments*.

The limitations corresponding to *wherein the identified first communication protocol is used to dynamically program a first control circuit within the first signal path or a second control circuit within the second signal path* are discussed in detail in the proceeding section entitled *Response to Arguments*. Therefore, Deutsch in view of Ryu makes obvious all limitations of the claim.

**Claims 7, 8, 11, and 12** are essentially the same as claim 17 and are rejected for the same reasons, with the exception that the control circuit as recited herein is programmed according to the communication protocol used by the *telephony appliance* instead of the communication protocol used by the telephone switching system. The limitations concerning *wherein configuring the signal path includes dynamically programming a first control circuit within the signal path according to the identified first communication protocol* are discussed in detail in the proceeding section entitled *Response to Arguments*. Therefore, Deutsch in view of Ryu makes obvious all limitations of the claim.

**Claim 20** is limited to *the method according to claim 17*, as covered by Deutsch in view of Ryu. Deutsch discloses measuring the power on each line (i.e. *measuring a first voltage supplied by the telephone switching system...*) with a power test circuit and microprocessor (i.e. *to a resistive load*) (figure 2, elements 41 and 42) (column 5, line 9-column 6, line 10). Therefore, Deutsch in view of Ryu makes obvious all limitations of the claim.

**Claim 23** is limited to *the method according to claim 17*, as covered by Deutsch in view of Ryu. Deutsch discloses identifying the network the customer premises equipment is connected to (i.e. *identifying a communication protocol utilized by the telephone switching system*) (abstract). Therefore, Deutsch in view of Ryu makes obvious all limitations of the claim.

**Claim 24** is limited to *the method according to claim 23*, as covered by Deutsch in view of Ryu. Deutsch discloses a switch hook relay that detects when a device is on/off-hook (i.e. *detecting an on-hook/off-hook condition of the telephony appliance*) (column 4, lines 47-52). Therefore, Deutsch in view of Ryu makes obvious all limitations of the claim.

**Claim 14** is essentially the same as claim 24 and is rejected for the same reasons.

**Claim 25** is limited to *the method according to claim 24*, as covered by Deutsch in view of Ryu. Deutsch discloses providing hook status signals to the network (i.e. *providing an indication of the on-hook/off-hook condition of the telephony appliance to the telephone switching system...*) when in the analog mode (i.e. *in accordance with the identified protocol*) (column 4, lines 47-52). Providing hook status signals to a network includes a transition from *an on-hook condition to an off-hook condition*. Therefore, Deutsch in view of Ryu makes obvious all limitations of the claim.

**Claim 15** is essentially the same as claim 25 and is rejected for the same reasons.

**Claim 26** is limited to *the method according to claim 24*, as covered by Deutsch in view of Ryu. Deutsch discloses providing hook status signals to the network (i.e. *providing an indication of the on-hook/off-hook condition of the telephony appliance to the telephone switching system...*) when in the analog mode (i.e. *in accordance with the identified protocol*) (column 4, lines 47-52). Providing hook status signals to a network includes a transition from *an off-hook condition to an on-hook condition*. Therefore, Deutsch in view of Ryu makes obvious all limitations of the claim.

**Claim 16** is essentially the same as claim 26 and is rejected for the same reasons.

**Claim 10** is rejected for the same reasons applied in both claims 25 and 26 together.

**Claim 9** is limited to *the method according to claim 7*, as covered by Deutsch in view of Ryu. Deutsch discloses connecting terminal devices to a telephone network, thus providing communication for all telephone signals (i.e. *wherein the signal path is utilized for communicating voice and control signals between the telephony appliance and the telephone switching system*) (column 2, line 47-column 3, line 19). Therefore, Deutsch in view of Ryu makes obvious all limitations of the claim.

**Claim 13** is essentially the same as claim 9 and is rejected for the same reasons.

**Claim 27** is essentially the same as claim 17, as covered by Deutsch in view of Ryu, with the further limitation of *translating a communication according to the communication protocol of the switching system and further according to the communication protocol of the telephony appliance*. Deutsch discloses a CODEC

(figure 1b, element 20) that *translates* digital ISDN signals (i.e. *according translating a communication according to the protocol of the switching system...*) into analog signals used by terminal devices (i.e. *and the telephony appliance*) (figure 1b, elements 22 and 27) (column 4, lines 13-44).

The limitations corresponding to *wherein the first communication protocol and the second communication protocol must first be identified before the telephony appliance and the telephone switching system being communicating with one another* are discussed in detail in the Non-Final office action filed 01 December 2004 in the section entitled *Response to Arguments*.

The limitations corresponding to *dynamically programming a control circuit according to the determined first communication protocol* are discussed in detail in the proceeding section entitled *Response to Arguments*. Therefore, Deutsch in view of Ryu makes obvious all limitations of the claim.

2. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deutsch in view of Ryu and further in view of Gutzmer (US Patent 5,555,300).

**Claim 19** is limited to *the method according to claim 17*, as covered by Deutsch in view of Ryu. Deutsch discloses detecting an analog network and connecting the appropriate power lines to support the analog network (i.e. *adapting the second signal path according to requirements of the telephone switching system*). Therefore, Deutsch in view of Ryu makes obvious all limitations of the claim with the exception of *adjusting an amplification level*.



Gutzmer teaches to adapt the microphone amplification level of a telephone based on the detection of a telephone dial tone (i.e. *according to a level of a dial tone provided by the telephone switching system*) thus providing a voice signal with maximum signal strength and minimum distortion (column 2, lines 14-39). It would have been obvious to one of ordinary skill in the art at the time of the invention to adjust the amplification level of the handset microphone of Deutsch in view of Ryu by the method as taught by Gutzmer for providing a voice signal with maximum strength and minimum distortion.

**Claim 18** is rejected for the same reasons as claim 19.

#### ***Allowable Subject Matter***

The following is a statement of reasons for the indication of allowable subject matter:

3. **Claims 21 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.**

**Claim 21** is limited to *the method according to claim 20*, as covered by Deutsch in view of Ryu. As explained in claim 20, Deutsch discloses measuring the power on each line with a power test circuit and microprocessor, but does not vary the power test conditions to include unloaded conditions. Therefore, Deutsch in view of Ryu makes obvious all limitations of the claim with the exception of *measuring a second voltage supplied by the telephone switching system under unloaded conditions*. Therefore, claim 20 is allowable.

**Claim 22** is allowable because it is dependent on claim 21.

***Response to Arguments***

4. Applicant's arguments with respect to claim 7-22 and 24-27 filed 03 March 2005, have been fully considered but they are not persuasive.

With respect to claim 7, the applicant alleges on page 10 of the current response that the combination of Deutsch and Ryu fails to disclose, teach or suggest dynamically programming a control circuit according to an identified communications protocol of a telephone switching system; the examiner respectfully disagrees. As a first matter, claims 7 and 11 have been amended so that dynamic programming occurs based on the protocol used by the telephony appliance while claims 17 and 27 have been amended to recite dynamic programming in response to the protocol used by the telephone switching system. Thus, the applicant's argument is moot. However, to further prosecution, it will be shown that Ryu does teach dynamic programming according to an identified first communication protocol utilized by a telephony appliance as recited.

In particular, the private automatic branch exchange (100) depicted in figures 1 and 2 includes two interface units (108) and (110) in each extension port. Based on the type of telephone terminal connected to the extension port, at least one of the interfaces dynamically configures itself. For example, in figure 1, interface (108) must provide a digital interface while interface (110) provides a standard two-wire telephone interface. In figure 2, both interfaces are configured to handle four-wire key telephone signals. In essence, the interfaces form a control circuit as recited simply because the claim makes

no distinction concerning the function of the control circuit and because the dynamically configure, i.e. program, themselves according to the type of telephone they interface with. As all of the applicant's arguments have been shown to be either moot or unpersuasive, the rejection of claim 7 is maintained.

**With respect to claims 8-10**, the applicant alleges that they are allowable over the cited prior art because of their dependence on claim 7; the examiner respectfully disagrees. As all arguments concerning claim 7 have been shown to be either moot or unpersuasive, and because the applicant has not presented further arguments concerning its dependent claims, the rejections of claims 8-10 are maintained.

**With respect to claim 11**, the applicant alleges on page 11 of the current response that the combination of Deutsch and Ryu fails to disclose, teach or suggest dynamically programming a control circuit according to an identified communications protocol of a telephone switching system; the examiner respectfully disagrees. This arguments is essentially the same as the arguments treated above concerning claim 7. As all of the applicant's arguments have been shown to be either moot or unpersuasive, the rejection of claim 11 is maintained.

**With respect to claims 12-16**, the applicant alleges that they are allowable over the cited prior art because of their dependence on claim 11; the examiner respectfully disagrees. As all arguments concerning claim 11 have been shown to be either moot or unpersuasive, and because the applicant has not presented further arguments concerning its dependent claims, the rejections of claims 12-16 are maintained.

**With respect to claim 17**, the applicant alleges on pages 11 and 12 of the current response that the combination of Deutsch and Ryu fails to disclose, teach or suggest dynamically programming a control circuit according to an identified communications protocol of a telephone switching system; the examiner respectfully disagrees. Central to the applicant's conclusion is the correspondence of the microprocessor (41) to the control circuit claimed. However, the microprocessor (41) is not the only device within Deutsch that can be considered a control circuit. As identified in the treatment of the applicant's arguments concerning claim 7, the claim does not recite the function of the control circuits within the signal paths. It follows that the switch matrix (43), which controls the signal flow to one of loops (44), (45) and (50) and is dynamically programmed because it dynamically changes the active output loop in response to the type of protocol used by the telephone switching network detected by the microprocessor (41), corresponds to a dynamically programmed control circuit. As all of the applicant's arguments have been shown to be either moot or unpersuasive, the rejection of claim 17 is maintained.

**With respect to claims 18-22 and 24-26**, the applicant alleges that they are allowable over the cited prior art because of their dependence on claim 17; the examiner respectfully disagrees. As all arguments concerning claim 17 have been shown to be either moot or unpersuasive, and because the applicant has not presented further arguments concerning its dependent claims, the rejections of claims 18-22 and 24-26 are maintained.

**With respect to claim 27**, the applicant alleges on pages 12 and 13 of the current response that the combination of Deutsch and Ryu fails to disclose, teach or suggest dynamically programming a control circuit according to an identified communications protocol of a telephone switching system; the examiner respectfully disagrees. This arguments is essentially the same as the arguments treated above concerning claim 17. As all of the applicant's arguments have been shown to be either moot or unpersuasive, the rejection of claim 27 is maintained.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter F. Briney III whose telephone number is 571-272-7513. The examiner can normally be reached on M-F 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

WFB  
8/3/05

  
**SINH TRAN**  
**SUPERVISORY PATENT EXAMINER**